

Protocol: adult\_spine\_THORACIC Pre and Post

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	GEM Spine	Imaging Options	Seq, EDR, Fast, SS, ARC
Plane	3-PLANE	<b>SCAN RANGE</b>	
Series Description	3-Plane Localizer	FOV	50.0
<b>SCAN TIMING</b>		Slice Thickness	4.0
TE	80.0	Slice Spacing	5.0
Number of Echoes	1	<b>ACQ TIMING</b>	
TR	Minimum	Freq	384
Receiver Bandwidth	83.33	Phase	160
<b>IMAGE ENHANCE</b>		Freq DIR	Unswap
Filter Choice	None	# of Acq. Before Pause	0
<b>GATING/TRIGGER</b>		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
<b>FMRI</b>		Phase Correction	No
PSD Trigger	Internal	<b>USER CVS</b>	
View Order	Bottom/Up	User CV1	1.00
# of Repetitions REST	0	User CV2	240.00
# of Repetitions ACTIVE	0	User CV13	1.00
<b>SAT</b>		<b>MULTI-PHASE</b>	
Tag Type	None	Seperate Series	0
<b>TRICKS</b>		Mask Phase	0
Pause On/Off	On	Mask Pause	0
Auto Subtract	0	<b>DIFFUSION</b>	
Auto SCIC	Off	Recon All Images	On
		<b>CONTRAST</b>	
		Contrast Yes/No	No

3-Plane Localizer

3-Plane Localizer

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	GEM Spine	Imaging Options	FC, NPW, EDR, TRF, Fast, FR
Plane	OBLIQUE		
Series Description	SAGITTAL T1W FOR COUNTING		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	26.0
TE	Min Full	Slice Thickness	4.0
Number of Echoes	1	Slice Spacing	1.0
TR	400.0		
Echo Train Length	5	ACQ TIMING	
Receiver Bandwidth	41.67	Freq	256
		Phase	160
		Freq DIR	A/P
		Fat Shift DIR	Normal (P)
		NEX	1.00
		Auto Shim	Auto
		Phase Correction	No
		Flow Direction Compensation	Freq
IMAGE ENHANCE		USER CVS	
Filter Choice	None	User CV15	2.00
		User CV17	1.00
GATING/TRIGGER		MULTI-PHASE	
Auto Trigger Type	Off	Seperate Series	0
		Mask Phase	0
		Mask Pause	0
FMRI		DIFFUSION	
PSD Trigger	Internal	Recon All Images	On
View Order	Bottom/Up		
# of Repetitions REST	0	CONTRAST	
# of Repetitions ACTIVE	0	Contrast Yes/No	No
SAT			
Tag Type	None		
TRICKS			
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	Off		

SAGITTAL T1W FOR COUNTING

SAGITTAL T1W FOR COUNTING

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	GEM Spine	Imaging Options	FC, NPW, EDR, TRF, Fast, FR
Plane	OBLIQUE		
Series Description	SAGITTAL T2W		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	32.0
TE	102.0	Slice Thickness	3.0
Number of Echoes	1	Slice Spacing	1.0
TR	2668.0		
Echo Train Length	21	ACQ TIMING	
Receiver Bandwidth	41.67	Freq	416
		Phase	256
		Freq DIR	A/P
		Fat Shift DIR	Normal (P)
		NEX	4.00
		Auto Shim	Auto
		Phase Correction	No
		Flow Direction Compensation	Freq
IMAGE ENHANCE		USER CVS	
Filter Choice	None	User CV15	2.00
		TR Min	2500.0
		TR Max	6000.0
GATING/TRIGGER		MULTI-PHASE	
Auto Trigger Type	Off	Seperate Series	0
		Mask Phase	0
		Mask Pause	0
FMRI		DIFFUSION	
PSD Trigger	Internal	Recon All Images	On
View Order	Bottom/Up		
# of Repetitions REST	0		
# of Repetitions ACTIVE	0		
SAT		CONTRAST	
Tag Type	None	Contrast Yes/No	No
TRICKS			
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	2		

SAGITTAL T2W

SAGITTAL T2W

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	GEM Spine	Imaging Options	FC, NPW, Seq, EDR, TRF, Fast, ZIP512, ARC, IrP
Plane	OBLIQUE	PSD Name	frfse-xl
Series Description	SAGITTAL STIR		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	32.0
TE	49.0	Slice Thickness	3.0
Number of Echoes	1	Slice Spacing	1.0
TR	3777.0		
TI	160	ACQ TIMING	
Echo Train Length	13	Freq	320
Receiver Bandwidth	41.67	Phase	224
		Freq DIR	A/P
		Fat Shift DIR	Normal (P)
		NEX	3.00
		Auto Shim	Auto
		Phase Correction	No
		Flow Direction Compensation	Freq
IMAGE ENHANCE		USER CVS	
Filter Choice	None	User CV22	1.00
		TR Min	2000.0
		TR Max	15000.0
GATING/TRIGGER		MULTI-PHASE	
Auto Trigger Type	Off	Seperate Series	0
		Mask Phase	0
		Mask Pause	0
FMRI		DIFFUSION	
PSD Trigger	Internal	Recon All Images	On
View Order	Bottom/Up		
# of Repetitions REST	0	CONTRAST	
# of Repetitions ACTIVE	0	Contrast Yes/No	No
SAT			
Tag Type	None		
TRICKS			
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	Off		

SAGITTAL STIR

SAGITTAL STIR

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	GEM Spine	Imaging Options	NPW, EDR, TRF, Fast, ZIP512
Plane	OBLIQUE		
Series Description	SAGITTAL T1W		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	32.0
TE	Min Full	Slice Thickness	3.0
Number of Echoes	1	Slice Spacing	1.0
TR	637.0		
Echo Train Length	4	ACQ TIMING	
Receiver Bandwidth	41.67	Freq	416
		Phase	256
		Freq DIR	A/P
		Fat Shift DIR	Normal (P)
		NEX	4.00
		Auto Shim	Auto
		Phase Correction	No
IMAGE ENHANCE		USER CVS	
Filter Choice	None	User CV15	2.00
		User CV16	1.00
		User CV22	1.00
		TR Min	400.0
		TR Max	650.0
GATING/TRIGGER		MULTI-PHASE	
Auto Trigger Type	Off	Seperate Series	0
		Mask Phase	0
		Mask Pause	0
FMRI		DIFFUSION	
PSD Trigger	Internal	Recon All Images	On
View Order	Bottom/Up		
# of Repetitions REST	0		
# of Repetitions ACTIVE	0		
SAT		CONTRAST	
Tag Type	None	Contrast Yes/No	No
TRICKS			
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	2		

SAGITTAL T1W

SAGITTAL T1W

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AXIAL T2W INFERIOR SET PHASE AP	<b>PATIENT POSITION</b>		<b>IMAGING PARAMETERS</b>	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	FSE-XL
	Coil Configuration	GEM Spine	Imaging Options	FC, NPW, EDR, TRF, Fast, ZIP512, FR
	Plane	OBLIQUE	<b>SCAN RANGE</b>	
	Series Description	AXIAL T2W INFERIOR SET PHASE AP	FOV	16.0
	<b>SCAN TIMING</b>		Slice Thickness	4.0
	Flip Angle	160	Slice Spacing	1.0
	TE	102.0	<b>ACQ TIMING</b>	
	Number of Echoes	1	Freq	256
	TR	4822.0	Phase	192
	Echo Train Length	22	Freq DIR	R/L
	Receiver Bandwidth	41.67	Fat Shift DIR	Normal (L)
	<b>IMAGE ENHANCE</b>		NEX	4.00
	Filter Choice	None	Auto Shim	Auto
	<b>GATING/TRIGGER</b>		Phase Correction	No
	Auto Trigger Type	Off	Flow Direction Compensation	Slice
	<b>FMRI</b>		<b>USER CVS</b>	
	PSD Trigger	Internal	User CV15	2.00
	View Order	Bottom/Up	TR Min	2500.0
# of Repetitions REST	0	TR Max	11000.0	
# of Repetitions ACTIVE	0	<b>MULTI-PHASE</b>		
<b>SAT</b>		Seperate Series	0	
Tag Type	None	Mask Phase	0	
<b>TRICKS</b>		Mask Pause	0	
Pause On/Off	On	<b>DIFFUSION</b>		
Auto Subtract	0	Recon All Images	On	
Auto SCIC	Off	<b>CONTRAST</b>		
		Contrast Yes/No	No	

AXIAL T2W INFERIOR SET PHASE AP

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	GEM Spine	Imaging Options	FC, NPW, EDR, TRF, Fast, ZIP512, FR
Plane	OBLIQUE		
Series Description	AXIAL T2W SUPERIOR SET PHASE RL		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	16.0
TE	102.0	Slice Thickness	4.0
Number of Echoes	1	Slice Spacing	1.0
TR	5314.0		
Echo Train Length	22	ACQ TIMING	
Receiver Bandwidth	41.67	Freq	256
		Phase	192
		Freq DIR	A/P
		Fat Shift DIR	Normal (A)
		NEX	4.00
		Auto Shim	Auto
		Phase Correction	No
		Flow Direction Compensation	Slice
IMAGE ENHANCE		USER CVS	
Filter Choice	None	User CV15	2.00
		TR Min	2500.0
		TR Max	11000.0
GATING/TRIGGER		MULTI-PHASE	
Auto Trigger Type	Off	Seperate Series	0
		Mask Phase	0
		Mask Pause	0
FMRI		DIFFUSION	
PSD Trigger	Internal	Recon All Images	On
View Order	Bottom/Up		
# of Repetitions REST	0		
# of Repetitions ACTIVE	0		
SAT		CONTRAST	
Tag Type	None	Contrast Yes/No	No
TRICKS			
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	Off		

AXIAL T2W SUPERIOR SET PHASE RL

AXIAL T2W SUPERIOR SET PHASE RL

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	GEM Spine	Imaging Options	NPW, EDR, TRF, Fast
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	Ax T1 Pre	FOV	16.0
<b>SCAN TIMING</b>		Slice Thickness	4.0
Flip Angle	160	Slice Spacing	1.5
TE	Min Full	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	288
TR	471.0	Phase	200
Echo Train Length	3	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (A)
<b>IMAGE ENHANCE</b>		NEX	4.00
Filter Choice	None	# of Acq. Before Pause	0
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	Yes
<b>FMRI</b>		<b>USER CVS</b>	
PSD Trigger	Internal	User CV22	1.00
View Order	Bottom/Up	TR Min	400.0
# of Repetitions REST	0	TR Max	750.0
# of Repetitions ACTIVE	0	<b>MULTI-PHASE</b>	
<b>SAT</b>		Seperate Series	0
Tag Type	None	Mask Phase	0
<b>TRICKS</b>		Mask Pause	0
Pause On/Off	On	<b>DIFFUSION</b>	
Auto Subtract	0	Recon All Images	On
Auto SCIC	2	<b>CONTRAST</b>	
		Contrast Yes/No	No

Ax T1 Pre

Ax T1 Pre

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	GEM Spine	Imaging Options	NPW, EDR, TRF, Fast
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	Ax T1 Post	FOV	16.0
<b>SCAN TIMING</b>		Slice Thickness	4.0
Flip Angle	160	Slice Spacing	1.5
TE	Min Full	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	288
TR	476.0	Phase	200
Echo Train Length	3	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (A)
<b>IMAGE ENHANCE</b>		NEX	4.00
Filter Choice	None	# of Acq. Before Pause	0
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	Yes
<b>FMRI</b>		<b>USER CVS</b>	
PSD Trigger	Internal	User CV22	1.00
View Order	Bottom/Up	TR Min	400.0
# of Repetitions REST	0	TR Max	750.0
# of Repetitions ACTIVE	0	<b>MULTI-PHASE</b>	
<b>SAT</b>		Seperate Series	0
Tag Type	None	Mask Phase	0
<b>TRICKS</b>		Mask Pause	0
Pause On/Off	On	<b>DIFFUSION</b>	
Auto Subtract	0	Recon All Images	On
Auto SCIC	2	<b>CONTRAST</b>	
		Contrast Yes/No	Yes

Ax T1 Post

Ax T1 Post

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SAG T1W Post Fat Sat	<b>PATIENT POSITION</b>		<b>IMAGING PARAMETERS</b>	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	FSE-XL
	Coil Configuration	GEM Spine	Imaging Options	NPW, EDR, TRF, Fast, ZIP512
	Plane	OBLIQUE	<b>SCAN RANGE</b>	
	Series Description	SAG T1W Post Fat Sat	FOV	32.0
	<b>SCAN TIMING</b>		Slice Thickness	3.0
	Flip Angle	160	Slice Spacing	1.0
	TE	Min Full	<b>ACQ TIMING</b>	
	Number of Echoes	1	Freq	384
	TR	572.0	Phase	224
	Echo Train Length	4	Freq DIR	A/P
	Receiver Bandwidth	31.25	Fat Shift DIR	Normal (P)
	<b>IMAGE ENHANCE</b>		NEX	3.00
	Filter Choice	None	# of Acq. Before Pause	0
	<b>GATING/TRIGGER</b>		Auto Shim	Auto
	Auto Trigger Type	Off	Phase Correction	No
	<b>FMRI</b>		<b>USER CVS</b>	
	PSD Trigger	Internal	User CV15	2.00
	View Order	Bottom/Up	User CV16	1.00
	# of Repetitions REST	0	User CV19	1.00
	# of Repetitions ACTIVE	0	User CV22	1.00
	<b>SAT</b>		TR Min	400.0
	Tag Type	None	TR Max	650.0
	Fat/Water Saturation	Fat Classic	<b>MULTI-PHASE</b>	
	<b>TRICKS</b>		Seperate Series	0
	Pause On/Off	On	Mask Phase	0
	Auto Subtract	0	Mask Pause	0
Auto SCIC	2	<b>DIFFUSION</b>		
		Recon All Images	On	
		<b>CONTRAST</b>		
		Contrast Yes/No	Yes	

SAG T1W Post Fat Sat